used amplification not just hybridisation

Amplification of fluorescent in situ hybridisation signals in formalin fixed paraffin wax embedded sections of colon tumour using biotinylated tyramide.

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Fluorescent in situ hybridisation (**FISH**) is a powerful tool for the evaluation of chromosomal alterations in formalin fixed paraffin wax embedded sections of colorectal cancer. However, initial experiments using a two-step detection system for digoxigenin labelled chromosome specific centromeric probes resulted in a complete lack of hybridisation signal from a number of colorectal tumour sections. This was due to high levels of background autofluorescence observed in this tissue, which masked any relatively weak hybridisations present. To overcome this **problem** , a biotinylated tyramide mediated amplification system was incorporated into the **FISH** detection protocol. This involves the use of horseradish peroxidase to activate the biotinylated tyramide, resulting in the deposition of a large number of biotin molecules at the site of bound peroxidase, which corresponds directly to the location of hybridised probe. Final detection was by means of a streptavidin-FITC conjugate. Using this technique, a panel of 11 colorectal tumour samples studied to date have shown strong, specific hybridisation signals to the nucleus of tumour cells. Amplification of **FISH** signals by biotinylated tyramide has the potential to improve weak hybridisation signals in cells from numerous sources, using a variety of probe types, including single **copy gene** probes as well as centromere specific probes.

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Descriptors: *Biotin--analogs and derivatives--AA; *Colonic Neoplasms --genetics--GE; *In Situ **Hybridization** , Fluorescence--methods--MT; *Tyramine--analogs and derivatives--AA

17/3,K,AB/3 (Item 1 from file: 55)
DIALOG(R)File 55:Biosis Previews(R)

0015439346 BIOSIS NO.: 200510133846
Biomarkers for prediction of sensitivity to EGFR inhibitors in non-small

cell lung cancer

AUTHOR: Hirsch Fred R (Reprint); Witta Samir
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Set      Items   Description
S1      401474   FISH
S2      448613   HYBRIDIZ?
S3       40905   S1 AND S2
S4      744123   PROBLEM
S5         368   S3 AND S4
S6     1134936   REVIEW
S7          26   S5 AND S6
S8       26098   CYTOGENETICS
S9           4   S7 AND S8
S10          2   RD  (unique items)
S11       5095   SENSITIVITY(2N)LEVEL
S12         13   S3 AND S11
S13         10   RD  (unique items)
? s gene(2n)(amplication or copy)
          2790506  GENE
              411  AMPLICATION
           116711  COPY
     S14    12912  GENE(2N)(AMPLICATION OR COPY)
? s s3 and s14
            40905  S3
            12912  S14
     S15      535  S3 AND S14
? s s15 and s4
              535  S15
           744123  S4
     S16        8  S15 AND S4
? rd
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French multi-centric study of 2000 amniotic fluid interphase FISH **analyses from high-risk pregnancies and** review **of the literature.**

Luquet I; Mugneret F; Athis P D; Nadal N; Favre B; Abel C; Chelloug N; Lespinasse J; Portnoi M F; Joye N; Dupont J M; Lebbar A; Bresson J L; Fellmann F; Siffroi J P; Chantot-Bastaraud S; Chiesa J; Amblard F; Devillard F; Jeandidier E; Boceno M; Rival J M; Bellec V; Lallaoui H; Delobel B; Croquette M F; Benzacken B

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Annales de genetique (France) Apr-Jun 2002, 45 (2) p77-88, ISSN 0003-3995 Journal Code: 0370562

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This prospective and multi-centric study confirms the accuracy and the limitations of interphase **FISH** and shows that any **cytogenetics** laboratory can perform this technique. With regard to the technical approach, we think that slides must be examined by two investigators, because the scoring may be subjective. The main **problem** with the AneuVysion kit concerns the alpha satellite probes, and especially the chromosome 18 probe, which is sometimes very difficult to interpret because of the high variability of the size of the spots, and this may lead to false negative and uninformative cases. The best solution would be to replace these probes by locus-specific probes. Concerning clinical management, we offer interphase **FISH** only in very high-risk pregnancies or/and at late gestational age because of the cost of the test. We think that an aberrant **FISH** result can be used for a clinical decision when it is associated with a corresponding abnormal ultrasound scan. In other cases, most of the time, we prefer to wait for the standard karyotype.

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Descriptors: *Amniotic Fluid--cytology--CY; *Aneuploidy; *Chromosome Aberrations; *In Situ **Hybridization** , Fluorescence; *Interphase

10/3,K,AB/2 (Item 1 from file: 55)

0010979813 BIOSIS NO.: 199799613873

Cytogenetic and molecular cytogenetic analysis of B cell chronic lymphocytic leukemia: Specific chromosome aberrations identify prognostic subgroups of patients and point to loci of candidate genes

AUTHOR: Doehner H (Reprint); Stilgenbauer S; Fischer K; Bentz M; Lichter P
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